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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,969	07/14/2003	Chung-Chih Hsiao	PUSA030643	9695
7590	06/03/2004			
Chung-Chih Hsiao 58, MA YUAN WEST ST. TAICHUNG, TAIWAN			EXAMINER MORILLO, JANELLE COMBS	
			ART UNIT 1742	PAPER NUMBER

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,969

Applicant(s)

HSIAO, CHUNG-CHIH

Examiner

Janelle Combs-Morillo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed.

Applicant is advised of the availability of the publication "Attorneys and Agents Registered to Practice Before the U.S. Patent and Trademark Office." This publication is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Tack (US 5,620,652).

Tack teaches an aluminum alloy with 0.65% Si, 0.559% Fe, 0.27% Cu, 0.272% Mn, 1.023% Mg, 0.009% Cr, 0.40% Sc, 0.12% Zr, balance aluminum (96.697% Al), see column 9 lines 59-66, Table 1 example M6061, which falls within the instant alloying ranges of claims 2, 5, and 6, and contains all of the alloying elements listed in claim 1. Because a reference with a

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specific embodiment anticipates a broad range, it is held that Tack anticipates claims 1, 2, 5, and 6 (MPEP 2131.02).

4. Claims 1-3, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Baumann et al (US 5,624,632).

Baumann teaches an aluminum alloy consisting of: 6.5% Mg, 0.23% Sc, 0.09% Zr (see column 4 line 23, Alloy C), wherein said alloy contains up to 0.25% Cu (column 4 lines 1-2), and up to 0.15% Si (column 3 line 62). Said composition falls within the alloying ranges of claims 2, 3, 5, and 6, and consists of all of the alloying elements listed in claim 1. Because a reference with a specific embodiment anticipates a broad range, and because the (narrow) ranges of Cu and Si taught by Baumann significantly overlap the presently claimed Cu and Si ranges, (that is, "with sufficient specificity", see MPEP 2131.03), it is held that Baumann anticipates the instant invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schoerner et al (US 3,811,846).

Schoerner teaches an aluminum alloy with good electrical properties comprising (in weight%) 0.1-1.6% Co, 0.3-1.3% Fe, less than 0.4% Mg, less than 0.4% Cu (abstract), and one

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or more of 0.001-0.45% Si, 0.001-0.45% Zr (column 2 lines 65-66), and 0.001-0.45% Sc (column 3 line 3), and 99.5-97% Al (abstract), which overlaps the presently claimed alloying elements in instant claim 1.

Concerning claims 2-8, the ranges stated above of Sc, Si, Mg, Zr, Cu, and Al overlap the instant alloying ranges.

Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05. It would have been obvious to one of ordinary skill in the art to select any portion of the range, including the claimed range, from the broader range disclosed in the prior art, because the prior art finds that said composition in the entire disclosed range has a suitable utility. It is held that Schoerner has created a prima facie case of obviousness of the presently claimed invention.

Concerning the fact that Schoerner teaches the presence of Co, which is not mentioned by the instant claims, the examiner points out that Co is not excluded by the instant claim language (see MPEP 2111.03, "Transitional Phrases"). The transitional phrases "comprising", "consisting essentially of" and "consisting of" define the scope of a claim with respect to what unrecited additional components or steps, if any, are excluded from the scope of the claim. The transitional term "comprising", is inclusive or open-ended and does not exclude additional, unrecited elements or method steps.

7. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tack (US 5,620,652).

Tack teaches an alloy composition resulting from adding Sc and Zr to a 6000 series aluminum alloy, said composition comprising (in weight%) 0.2-1.8% Si, 0.2-0.8% Mn, 0.4-1.4%

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Mg, 0.02-10% Sc, 0.1-1.0% Zr, 60-99% Al (column 31 lines 8-15), which substantially overlaps the presently claimed ranges of Si, Mg, Zr, and Sc. Tack further teaches that 0.1-0.4% Cu may also be present (column 7 lines 44-46), which overlaps the presently claimed range of Cu.

Overlapping ranges have been held to be a prima facie case of obviousness, see MPEP § 2144.05. It would have been obvious to one of ordinary skill in the art to select any portion of the range, including the claimed range, from the broader range disclosed in the prior art, because the prior art finds that said composition in the entire disclosed range has a suitable utility. It is held that Tack has created a prima facie case of obviousness of the presently claimed invention.

Allowable Subject Matter

8. The following claims 9-11 are drafted by the examiner and considered to distinguish patentably over the art of record in this application, are presented to applicant for consideration:

--Claim 9. An aluminum based material, consisting essentially of: 0.01%-0.5% Sc, 0.01%-0.5% Si, 0.01%-0.5% Mg, 0.01%-0.5% Zr, 0.01%-0.5% Cu, balance aluminum.

Claim 10. The aluminum based material in accordance with claim 9, wherein the aluminum is between 97.5%-99.95%.

Claim 11. The aluminum based material in accordance with claim 10, wherein the aluminum is greater than 98%.—

The prior art does not teach an aluminum based material “consisting essentially of” the above mentioned (in proposed claim 9) ranges of Sc, Si, Mg, Zr, and Cu.


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Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle Combs-Morillo whose telephone number is (571) 272-1240. The examiner can normally be reached on 8:30 am- 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER

JCM 

June 1, 2004